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ABSTRACT

An Australian study examined the relationship between current and past participation in education and training in small business and success or failure and how small businesses decide how to improve knowledge and skills. Telephone surveys were conducted with 181 small businesses in 4 industries in 3 metropolitan and 3 non-metropolitan regions. Findings indicated almost a third of the sample had an employee or owner attend a relevant course in the last 12 months; the largest group of courses attended were technical/production-related vocational education and training (VET); more than a third of the sample had undertaken on-the-job training; more than 80 percent found informal learning sources useful; about half had owners or employees with VET qualifications as their highest qualifications; owners' most common way of learning about their new business was experience or trial and error; successful owners were no more likely to have attended a course at the time they started in the businesses; there were few relationships between business success and recent participation in education and training; businesses that participated in on-the-job training were more likely to be successful; the most frequently given prompt for training was a general desire to improve efficiency; the most frequent reason for choosing a training or learning source was that it provided learning relevant to the business; and successful businesses were likely to be prompted to learn or train. (Contains 27 references.) (YLB)

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Learning in Small Business

Sue Kilpatrick & Susan Crowley

Discussion Paper D1/1999

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LEARNING IN SMALL BUSINESS

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Abstract

Small business is under represented in formal education and training activities. There is some work which suggests that small business relies on informal, contextualised learning methods, such as learning from suppliers or other businesses. Small businesses may hire staff who are already skilled for the job. It has also been suggested that many jobs in small businesses are low skilled, and so it is not surprising that small business has a lower participation rate in education and training.

This paper presents some findings from a study, funded by NREC, which surveyed 181 small businesses in three urban and three rural centres throughout Australia. The findings suggest a relationship between contextualised on-the-job training and success, and training and learning prompted by a desire to keep up to date and improve efficiency and success.

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Introduction

The Australian Bureau of Statistics (1998) has estimated that there were around 850,000 small private sector businesses in Australia in 1997, with some 3.5 million employers and employees. Small businesses accounted for almost half of total employment in 1994-95 and the small business workforce is increasing at a faster rate than the big business workforce (Howard 1997). The Council of Small Business Organisations of Australia draws attention to "a correlation between small and labour intensity", small business generates jobs because they are labour intensive (Bastian 1998). Small business is under represented in formal education and training activities (Wooden and Baker 1995), with studies finding that less than a quarter have participated in training since commencing business (NCVER 1998). If education and training are significant contributors to skill maintenance and development and as small business represents a large and growing proportion of national employment, then small businesses' under representation in education and training has implications for the level of skills in the economy as a whole.

Other forms of learning can contribute to development of knowledge and skills. Several researchers have found that small businesses do not value structured training; they prefer hands on learning (learning by doing) and believe that is more effective (Catts et al 1996; Robertson and Stuart 1996; Coopers and Lybrand 1994). This finding applies both to education and training before starting in business and continuing learning.

There is a growing body of work which suggests that small business relies on a range of informal, contextualised learning methods, such as learning from suppliers or other businesses, as well as learning by doing (for example Field 1998; 1997; A Gibb 1997). Writing about the learning environment of small business managers, A Gibb (1997) says:

> The predominant contextual learning mode in this environment is that of: dealing with a wide (holistic) task structure; learning from peers; learning by doing; learning by feedback from customers and suppliers; learning by copying; learning by experiment; learning by problem solving and opportunity taking; and learning from making mistakes...
>
> The learning environment described above is continually creating 'subjective' contextual knowledge; this contrasts sharply with the 'objective', largely decontextualised (from the specific problems/priorities of the firm) learning environment frequently provided by the teacher or trainer. (A Gibb 1997, 19)

Workplace learning is contextualised. It can be structured or unstructured, as is learning by feedback from customers and suppliers and most of the examples given in the quote from Gibb. Field (1998) points out that best practice workplace training in the Australian context is taken to be structured training, yet unplanned (and unstructured) learning can be very significant for individuals and their enterprises. He found that limited reliance on structured training did not mean that learning was limited. The learning which occurred between enterprises, such as between suppliers and their customers, was particularly important for business that are dependent on a high level of knowledge and skills.

Many reports (Bureau of Industry and Economics 1991; Karpin 1995; Coopers & Lybrand 1994) suggest that there is a low level of management skills among small business owners, and this impacts negatively on their attitude to skills development for themselves and their employees. Other reasons for low rates of small business participation in structured training given in the literature include: a preference for independence; lack of confidence in working in training settings; a preference for information from known sources; a fear of being exposed to new knowledge and skills; hiring staff who are already skilled for the job; many jobs in small businesses are low skilled; and the cost of training, including time (NCVER 1998; Kilpatrick and Rosenblatt 1998; J Gibb 1997).

Skills development, and training in particular, is often prompted by requirements of external bodies (government, awards, financial institutions, suppliers or customers), new technology, a desire to expand, and a crisis (Coopers & Lybrand 1994). Most of these prompts to learn are reactive, with the exception of a desire to expand and new technology if the business is an early adopter rather than following common practice in their industry.

Terminology

In this paper, the term course refers to activities organised by or in conjunction with an external body, and includes VET (vocational education and training) courses. Courses do not necessarily lead to an accredited qualification. Seminars and business meeting arranged with an aim of sharing or developing knowledge or skills, on-the-job training organised by the business, and learning from mentors or consultants engaged by the business are considered separately. These four activities (courses, on-the-job training, seminars and learning from mentors) are referred to as training. The term informal learning is used to cover learning from print and electronic media (not as part of an organised course), and incidental or ad hoc learning from customers, suppliers, and business and social networks. Education and training includes learning activities undertaken or accredited through an institution.

Business success, training and learning

Earlier work with small businesses in agriculture confirms a preference for informal learning methods for the sorts of reasons discussed above, but finds that businesses which participate in organised training (accredited and non-accredited) are more successful in terms of profitability (Kilpatrick 1997; 1996).

Specific, or on-the-job, training is an important factor in increasing productivity. A study by the American Society for Training and Development found that over half the productivity increases which occurred in the United States between 1929 and 1989 were due to learning on the job, and that people given formal workplace training have a thirty percent higher productivity rate (Business Council for Effective Literacy, 1993). Learning organisation theory literature is based on the premise that learning in the workplace increases productivity (for example, Senge 1993).

There is some evidence of a relationship between prior education and success in small business. Kilpatrick (1996) found that small agricultural business owner/managers with formal qualifications were more profitable because they were better able to make appropriate and successful changes in their business. Bureau of Industry Economics (1991) and number of studies summarised in World Bank (1995) found that small businesses with better educated managers are more likely to grow and/or survive. A large Australian study over a twelve year period found a significant relationship between prior formal education and business success (Williams, in McMahon, 1989, 62).

The ability and willingness to make successful changes to practices in the business is suggested as the link between education and training and business success (measured by productivity, profitability and/or survival). Education and training is especially important for those functions which require adaption to change (Sloan, 1994). Welch (1970), in a seminal work in human capital theory, found that education can affect productivity via improved quality of labour and also via an allocative effect which is due to improved ability to process information, select inputs and allocate inputs across competing uses. A number of studies suggest that the better educated are aware of a greater number of possible innovations through use of the mass media and contact with expert advisers (for example, Rogers, 1995). When combined with the enhanced ability to select the best of these innovations, this awareness will lead to superior outcomes for businesses with better educated managers and workforces.

A final body of literature which suggests that education improves responsiveness and adaptability is that which concludes that education alters values and attitudes. The interaction between participants which takes place during training time, and before and after sessions allows individuals to compare their values and attitudes with group norms. The opportunity to alter values and attitudes during training increases the probability of a change to practice (Guba & Lincoln, 1989).

Informal learning also has the potential to alter values and attitudes, either toward or away from change. Lave & Wenger (1991) suggest a model of learning as social construction. Learners learn to function in a community by learning the shared language and acquiring the community's subjective viewpoint. Brown and Duguid (1991) talk of shared meanings for interpreting complex activities being formed and transformed through problem solving in workplace communities.

Whilst work such as Field (1998) indicates the importance of informal learning to small businesses, there is no clear information about the relative importance of informal learning, on-the-job learning and structured education and training in business success. This paper attempts to shed some light on the issue by investigating whether successful business are more likely to be involved in various types of organised training, on-the-job training and informal learning, and examining the motivations, or prompts, for training and learning experiences.

This paper reports part of the findings of the NREC project 'The relationship between training and small business'. The findings here relate to the relationship between current and past participation in education and training in small business and success or failure, and how small businesses decide how to improve their knowledge and skills.

Methodology

A total of 181 small businesses in four industries in each of three metropolitan and three non-metropolitan regions were surveyed by telephone. The regions were chosen to include regions of varying rates of economic growth. Metropolitan centres are defined as those with a population of 100,000 or more.

The industries chosen represented those where most small businesses are located (Australian Bureau of Statistics 1997): construction, retail, property and business services, and manufacturing. Although more small businesses are located in agriculture than manufacturing, agriculture was not been selected because there is a large existing body of work on training and small agricultural businesses. Of the four nominated industries, one is a growing industry (property and business services), one is a declining industry (manufacturing) and two are industries which move with the economic cycle (construction and retail). Between 41 and 50 businesses from each of the four industries are in the final sample.

Small businesses were selected using random sampling from the Yellow Pages Internet Page. They were telephoned and asked about their number of employees. Only those will less than 20 employees were asked to participate. The sample is dominated by micro businesses, with one third having no employees (apart from the partner(s)), 30% only one or two employees and only 17% employing more than five people.

The survey asked closed questions about the age and size of the businesses, the qualifications of its owners and employees and whether the business was experiencing growth and changes in its environment. Open-ended questions asked about the nature and range of learning and training activities of owner/managers and their employees. The quantitative approach means that all instances of learning and training are assumed to be potentially equally valuable to the small business. For example, all the instances of on-the-job training are weighted equally, all courses are assumed to be the same quality, all seminars equally useful and all informal learning equally valuable.

Indicators of success were developed based on a review of the literature (Field 1997; Barrett 1998; Kelmar 1991). To be placed in the 'successful' category businesses had to have survived at least three years and either had increasing turnover, or maintained turnover at a steady level and met their non-financial goals, or maintained turnover at a steady level despite experiencing some event which had a negative impact on the business. In order to be sure that businesses in this last group had survived the negative event, those with

steady turnover and a negative event, but unmet non-financial goals had to have survived more than five years to be deemed successful.

Responses were entered directly onto an Excel spreadsheet as the interviews were conducted, and data were analysed using Excel and Statview computer programs to generate cross tabulations, descriptive statistics and multi-variate analyses.

Results

Participation in training and learning activities

This section provides a summary only of the results relating to participation in order to place the results relating to success and training and learning in context. Detailed results will be presented in the final report of the project.

Almost one third of the sample had had an employee or partner (owner) attend a relevant course in the last 12 months. The largest group of courses attended were technical/production related vocational education and training courses. Over one third of the sample had undertaken some on-the-job training. Business with employees, especially those under 25, were more likely to have participated in relevant courses and undertaken some on-the-job training.

Attendance at business meetings and seminars was more common than either participation in courses or on-the-job training, with over 60% attending a seminar or meeting in the last 12 months. In contrast to courses and on-the-job training, more seminars and meetings involved learning about management and management-related issues than technical or production issues. More than 30% had used a consultant or mentor.

Informal learning sources were found to be useful by over 80% of the sample, with learning from within industry sources the most frequently cited. Suppliers were the most frequently cited source. Media, those working in the business, family and social contacts, and professionals such as accountants, were all used by around half or more of the small businesses surveyed.

Participation in prior education and training and success

Around half the sample had partners and/or employees with VET qualifications as their highest qualification, and another fifth to a quarter had university qualifications. Those with partners and/or employees with university or VET qualifications are more likely to be in successful small businesses than those with only school qualifications (see Table 1).

Table 1: Indicators of success by highest qualifications of partners and employees

Highest employee &/or partner qualifications**	Successful	Other	Total % of sample
University	28	18	46
% of qualification category	*61%*	*45%*	*25%*
VET	51	37	88
% of qualification category	*58%*	*43%*	*49%*
School	13	28	41
% of qualification category	*32%*	*64%*	*23%*
Not stated	3	3	6
% of qualification category	*50%*	*50%*	*3%*
Total	95	86	181

** χ^2 P value <0.05

Learning at time partner(s) started business

The most common way of learning about their new business for the partners was experience or trial and error. Over half worked in this business before taking it over, or had worked in a related business. One third did a course (either on small businesses or the technical/ production aspects of the business). Advisors or mentors were used as a learning source by nearly a quarter of those surveyed (see Table 2).

Contrary to the result expected from the earlier discussion of other research, successful business partners were no more likely to have attended a course at the time they started in the businesses than partners of other businesses. However, successful business partners were more likely to have learnt from print or electronic media (typically magazines and books) and report that they learnt from experience or trial and error after they started or took over the business (Table 2).

Table 2: Learning method at time started business and success

Learning method	Successful	Other	Total (% of sample)
Worked it out, experience, trial and error*	69	46	115
% of success category	*73%*	*53%*	*64%*
Worked in business or related enterprise, learnt from previous owner	58	49	107
% of success category	*61%*	*57%*	*59%*
Did a course at time started business	31	29	60
% of success category	*48%*	*34%*	*33%*
Consultant, mentor	24	20	44
% of success category	*25%*	*23%*	*24%*
Business or social network	18	16	34
% of success category	*19%*	*19%*	*19%*
Media*	24	6	30
% of success category	*25%*	*7%*	*17%*
Total	95	86	181

* χ^2 P value < 0.05
More than one response allowed.

Current participation in training and learning activities

Table 3: Indicators of success by training and learning sources

Learning activity	Successful	Other	Total % of sample
Attended a course	35	22	57
% of success category	*37%*	*26%*	*31%*
On-the-job training**	41	25	66
% of success category	*43%*	*29%*	*36%*
Attended a seminar or business meeting	61	50	111
% of success category	*64%*	*58%*	*61%*
Used consultant or mentor	31	26	57
% of success category	*33%*	*30%*	*31%*
Media	18	11	29
% of success category	*19%*	*13%*	*16%*
Customers	11	14	25
% of success category	*12%*	*16%*	*14%*
People in the business	10	12	22
% of success category	*11%*	*14%*	*12%*
Others within the industry	23	79	85
% of success category	*50%*	*92%*	*47%*
External to industry, not social networks	29	20	49
% of success category	*31%*	*23%*	*27%*
Social networks	20	24	44
% of success category	*21%*	*28%*	*24%*
Any informal learning, excluding media	80	69	149
% of success category	*84%*	*80%*	*82%*
Total	95	86	181

** χ^2 P value <.05

There are few relationships between business success and recent participation in education and training or use of informal learning sources. Those businesses that participated in on-the-job training were more likely to be successful than those that did not (see Table 3). Further dissection of the 'others within industry' category shows no statistically significant relationship between learning from suppliers or customers and success category. Thus the results do not support a link between inter-enterprise informal learning, which Field (1998) notes is important for some businesses, and business success. Field's sampled businesses had two or more full-time employees, and may be more likely to be in industries that need inter-enterprise learning than the industries and micro businesses in this sample.

How small businesses decide how to improve their knowledge and skills

For each type of training and learning activity in which the business had participated, those interviewed were asked to recall what had prompted the business to train or learn, and why they had chosen the particular training or

learning activity undertaken. Table 4 shows prompts for specific types of learning activities. The prompts for training and learning for successful and other businesses are shown in Table 5.

A general desire to improve the efficiency, and thence profitability, of the business was the most frequently given prompt for training or learning, followed by looking for new opportunities, the introduction of new technology or work practices and on-going staff or management training or learning. Those planning learning and training activities in the future gave similar prompts.

Small businesses used different learning and training sources for different needs. Attendance at seminars and meetings was most frequently prompted by looking for new opportunities. Mentors and consultants were used most often in learning to solve a specific problem. Almost half of those who had attended a course did so because they were required to do so by law, an award, customer or supplier (Table 4). The small number of businesses prompted to undertake learning activities for 'other' reasons gave reasons related to a desire to participate in the community, or maintaining goodwill with suppliers.

Table 4: Prompts for undertaking learning activities, by learning source

Prompt	Course	% *citing prompt*	On-the-job training	% *citing prompt*	Seminar	% *citing prompt*	Mentor/ consultant	% *citing prompt*	*Times prompt cited*
To improve efficiency	39**	*68%*	44**	*67%*	69**	*62%*	32	*56%*	184
Seek new opportunities	24	*42%*	25	*38%*	88	*79%*	15	*26%*	152
New technology/ work practices	18**	*32%*	35*	*53%*	76	*68%*	10*	*18%*	139
On-going staff training, inc new staff / to keep up to date	33*	*58%*	42	*64%*	43	*39%*	11**	*19%*	129
To take advantage of an opportunity	9	*16%*	20**	*30%*	48	*43%*	20	*35%*	97
To solve a problem	8	*14%*	27**	*41%*	24	*22%*	38	*67%*	97
Recommended/advertised and looked useful	3	*5%*	4	*6%*	45	*41%*	13	*23%*	65
Required by law/award/ customer/ supplier	27	*47%*	7**	*11%*	24	*22%*	3	*5%*	61
A crisis in the business	2	*4%*	2	*3%*	3*	*3%*	8	*14%*	15
Other	3	*5%*	0	*0%*	6	*5%*	0	*0%*	9
Number participating	57		66		111		57		

*Proportion of successful businesses giving prompt is greater than other business χ^2 P value <0.1

** Proportion of successful businesses giving prompt is greater than other business χ^2 P value <0.05

More than one response could be given. Prompts for up to two activities of each type could be given.

Successful businesses were more likely than other businesses to be prompted to learn or train by a desire to improve efficiency, new technology or work practices. Successful businesses were more likely to use learning or training on an on-going basis or to learn or train as a means of keeping up to date. They were slightly more likely to learn or train to take advantage of an opportunity or to solve a problem (see Table 5). Businesses which were unsuccessful were more likely than those which were neither successful nor

unsuccessful (which includes those too new to determine their success) to be prompted to train to take advantage of new opportunity, requirements of an external agent and recommendations or advertising (Table 5).

Table 5: Prompts for undertaking any type of training or learning activity

Prompt	Successful	Neither successful nor unsuccessful	Unsuccessful	All
On-going training, keeping up to date**	50	16	15	81
%	*53%*	*35%*	*38%*	*45%*
Take advantage of opportunities*	34	8	12	54
%	*36%*	*17%*	*30%*	*30%*
Seek new opportunities	43	16	19	78
%	*45%*	*35%*	*48%*	*43%*
Improve efficiency**	62	16	15	93
%	*65%*	*35%*	*38%*	*51%*
Solve a problem*	33	11	9	53
%	*35%*	*24%*	*23%*	*29%*
A crisis	2	5	5	12
%	*2%*	*11%*	*13%*	*7%*
Required by law, award, customer or supplier	9	7	21	37
%	*9%*	*15%*	*53%*	*20%*
Recommended or advertised	22	6	11	39
%	*23%*	*13%*	*28%*	*22%*
New technology or work practices**	45	13	14	72
%	*47%*	*28%*	*35%*	*40%*
Total	95	46	40	181

*Proportion of successful businesses giving prompt is greater than other business χ^2 P value < 0.1

** Proportion of successful businesses giving prompt is greater than other business χ^2 P value <0.05

A breakdown of type of learning or training activity chosen for various categories of prompt shows that successful businesses were more likely than other businesses to choose courses when prompted by: a desire to improve efficiency; new technology or work practices; and, for on-going training or as a means of keeping up-to-date. Successful businesses were more likely than others to choose on-the-job training to take advantage of an opportunity; improve efficiency; solve a problem; implement new technology or work practices and for training required by an external agent. Mentors or consultants were used as a learning source on an on-going basis by successful businesses more than other businesses.

The most frequent reason for choosing a training or learning source was that it provided learning that was relevant to the business, followed by it was perceived to be a good way to learn and convenience of the location or time of the activity. Almost one quarter chose a training or learning source because

there was no alternative method of learning about the topic. There was no significant difference in the reasons for choice of activity given by successful businesses compared to other businesses.

When reasons for choice are considered for each of the learning and training types, there were some significant differences in the reasons given by successful and other businesses. Successful businesses were more likely to choose on-the-job training because it is relevant to the business, courses because of the convenience of timing or location and because they are seen to be a good way to learn about the topic, and a mentor or consultant because they provide learning which is relevant to the business.

Discussion and conclusions

The extent of course attendance by small businesses in this study appears to be slightly higher than the Australian Bureau of Statistics' Survey of Training and Expenditure quoted in Wooden & Baker (1995) and Field (1997), although the data are not directly comparable because the ABS survey responses from small businesses tend to concentrate on accredited training (Field 1997).

The findings support the existence of a link between prior education and training, measured by highest qualification levels of those working in the business, and the success of the small business, as found by Bureau of Industry Economics (1991), Kilpatrick (1996) and other studies cited in the introduction to this paper. However, the finding does not extend to taking a course at the time of going into a small business or subsequently attending relevant courses.

There is evidence that contextualised learning is related to success, supporting A Gibb (1997). Partner learning by trial and error and experience in the business at the time of starting the business was related to success, as was later contextualised training in the form of on-the-job training for employees or partners.

Informal learning, including from suppliers, customers and others within and outside of the industry was popular, with most businesses reporting informal learning and finding it useful, confirming findings of studies such as Field (1998), Catts et al (1996) and Coopers & Lybrand (1994). Informal learning was used to a similar extent by both successful and other businesses, although informal learning from media at the time of starting in the business was correlated with success.

Successful businesses were more likely to be prompted to learn or train, including to take courses, on-the-job training and use mentors, by a desire to improve efficiency, new technology or work practices and as a means of keeping up to date or for on-going training or learning purposes. This is consistent with learning being used to deal with change and with proactive rather than reactive prompts for learning (Coopers & Lybrand 1994).

This and other studies have found that successful businesses have better educated managers. A possible relationship between learning and training is as follows. As suggested by Welch (1970) and Rogers (1995), the better educated in small business are more aware of changes they could make to improve efficiency, partly because they use training and learning on an on-going basis to keep up to date. The changes they do make are more successful because they are aware that training and learn assist in the implementation of new technology and work practices.

The findings suggest that the benefits of contextualised learning, especially on-the-job training, should be promoted to small business. Awareness that successful businesses train and learn to improve efficiency and deal with change (implementing new technology and work practices) should be increased, as should awareness that successful businesses routinely use training and learning on an on-going basis. A change in attitude toward a learning culture in small business must be accompanied by easy access to relevant learning and training. This is a challenge for the Australian Training system, which is grappling with ways of involving the diverse small business sector in the formal training system.

Finally, some limitations of the study should be noted. The sample group was predominately micro businesses in four industries (retail, construction, property and business services and manufacturing) and the results therefore are indicative only of this group of small businesses. This study focussed on the relationship between various methods of training and learning and small business success at a macro level. It did not examine the features of the various types of training and learning which make them more or less effective. Issues such as assessment and delivery were not considered. It did not investigate the benefits of training and learning to individual employees of the business, who may transfer skills learnt from one work context to another and to non-work contexts in the wider community.

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